

REMARKS

Claims 1-26 are pending in the application. Claims 1-7, 9, 10, 12, 14-20, 22, 23 and 25 stand rejected. Claims 8, 11, 13, 21, 24 and 26 stand objected. The Examiner's objections and rejections are addressed below in substantially the same order as in the office action.

Claims 1 and 14 have been amended to correct a grammatical error.

CLAIM REJECTIONS UNDER 35 U.S.C. 102

Claims 1-7, 9, 10, 12, 14-20, 22, 23, and 25 stand rejected under 35 U.S.C. 102(b) as being anticipated by US 6,021,377 to Dubinsky et al. The Examiner contends that Dubinsky et al discloses all of the recitations of the independent claims and also the recitations of the above-listed dependent claims. The Examiner directs the Applicant's attention to Fig. 10 and the text in sections of columns 2 and 19, among other places, as the basis for this contention. Applicant agrees with the Examiner that the cited reference recites a system used in connection with optimizing drilling operations and shares several common elements with the present invention. To Applicant's reading, however, Dubinsky et al does not teach a controller that uses surface measured parameters or a controller that uses a constraint. Fig. 10 teaches only using measured BHA parameters, measured drill bit parameters, downhole measured borehole parameters, measured directional parameters and downhole measured drilling parameters. These parameters are measured subsurface. Likewise, Applicant has reviewed each of the portions of the specification cited by the Examiner. In each portion, extensive discussion is provided for downhole measurements, but in no instance is there a teaching that a surface measurement is used by a controller in conjunction with a model. With respect to the control parameter, Applicant has closely read col. 19, lines 19-27 and col. 2 lines 1-21, but did not find any teaching for a constraint that is used by a controller. These portions appear to explain that surface personnel control drilling parameters, but do not teach that a controller satisfy a constraint while producing or determining an optimized drilling parameter.

With respect to claims 1 and 14, Dubinsky et al does not teach or suggest a controller utilizing at least one measured surface and at least one selected constraint in the manner claimed. Because Dubinsky et al does not teach each and every recitation of claims 1 and 14, Applicant respectfully submits that claims 1 and 14 are in condition for allowance.

Claims 2-7, 9, 10, 12, 15-20, 22, 23, and 25 all depend from claims believed to be in condition for allowance and are allowable on at least those grounds.

ALLOWABLE CLAIMS

The Examiner objected to claims 8, 11, 13, 21, 24 and 26 as being dependent upon a rejected base claim, but allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

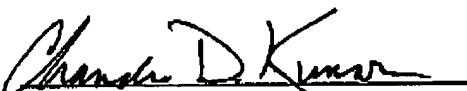
Applicant has rewritten claims 13 and 26 in independent form. Applicant believes that claims 8, 11, and 24 are allowable as currently presented in part because they depend from claims believed to be in condition for allowance.

CONCLUSION

For all the foregoing reasons, Applicant submits that the application is in a condition for allowance. The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to Deposit Account No. **02-0429 (564-35308-US)**.

Respectfully submitted,

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